

**DUKE ENERGY CAROLINAS, LLC AND DUKE ENERGY PROGRESS, LLC**

**Request:**

- 9-6. Duke Witness Herndon states that Mr. Grevatt “appears to be conflating the Companies’ use of a one year measure life for the purpose of cost effectiveness testing to the program’s savings persistence. While the behavioral measures do require annual program expenditures to reinforce the behavioral messaging, with continued program intervention, they show persistent savings over a number of years.” [Herndon Rebuttal at 10].
- a. Please provide the TRM values used by the Companies for the behavioral messaging program measure.
  - b. Is a one year measure life used for cost-effectiveness testing for behavioral messaging? If so, please explain why this is appropriate if the program has persistent savings.
  - c. Are there other measures in the market potential study for which a one-year measure life is used for cost-effectiveness testing, but which the Company purports have persistent savings over a number of years?
    - i. Please list all such measures.
    - ii. Do any or all of these measures “require annual program expenditures to reinforce” the savings?

**Response:**

- a. It is unclear what is meant by “TRM values”. The Companies use values independently verified through third-party evaluation, measurement, and verification (EM&V) for the MyHER program.
- b. Yes, a one-year measure life is used for cost-effectiveness testing because, as stated in Witness Herndon’s testimony, “behavioral measures do require annual program expenditures to reinforce the behavioral messaging”. If the messaging is not reinforced annually, the savings are likely to degrade. However, the program participants are re-enrolled year over year so that with the annually reinforced messaging, participants continue to save energy over a number of years. This is different from equipment measures where participants are different from year to year.
- c. No other EE measures included in the MPS have the same structure of repeated messaging or program investment that reinforces savings by the same participant group over multiple years. However, this is somewhat comparable to the DSM measures in the study, particularly residential direct load control, where an annual program expenditure is necessary, but participants re-enroll in the program and the curtailable load continues to be available over multiple years.

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- 9-7. Duke Witness Herndon states that “[t]he equipment-based measures that Mr. Grevatt appears to prefer can suffer from free-ridership because their designs make it challenging to establish such a causal relationship between implementation of the measure and energy savings.” [Herndon Rebuttal at 11].
- a. Mr. Herndon states that his experience includes “delivering third-party program evaluations.” [Herndon Rebuttal Exhibit 1 at 1]. Does Mr. Herndon’s or Nexant’s experience include developing net-to-gross estimates based on the causal relationship between program activities and measure adoption?

**Response:**

- a. Yes, Nexant has extensive experience in DSM process evaluations, including developing net-to-gross estimates.

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**Request:**

- 9-5. Duke Witness Herndon states that “Minimum efficiency criteria [for central air conditioning] was updated in 2006 and 2015 and another update is planned for 2023.” [Herndon Rebuttal at 8-9]. He also states that Nexant “agrees that there may be future changes to costs for higher SEER models, however there will likely also be accompanying changes to efficiency standards, and it would be inaccurate to assume technology improvements without considering codes and standards updates.” [Herndon Rebuttal at 9].
- a. Please confirm there was a nine-year period between 2006 and 2015 when standards were not increased, and an eight-year period between 2015 and the “planned” 2023 update.
  - b. In Mr. Herndon’s experience, how long, on average, does it take for a federal efficiency standard to be updated? Please provide the information that supports Mr. Herndon’s answer.
  - c. Did either Company claim EE savings for a central air conditioner measure between 2006 and 2015? Between 2015 and the present?

**Response:**

- a. Yes, minimum efficiency criteria for central air conditioning were updated in 2006 and 2015 and another update is planned for 2023.
- b. Mr. Herndon is not aware of an average timeline for federal efficiency standards updates and believes it is variable.
- c. Yes.

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- 9-8. Mr. Herndon states that “[the UCT] may be the most appropriate test perspective for utility program planning and design, but it does not consider customer economics, which is necessary in assessing market potential and rates of technology adoption by customers. Customers may not explicitly consider the TRC test in making decisions, but this test perspective does include the incremental costs that customers would incur to purchase and install an EE technology, while the UCT does not include any insight into customer expenses. Therefore, while the UCT sensitivity resulted in higher economic potential, which by definition is based on 100% market adoption of cost-effective measures, it is not directly transferable to achievable potential, where the customer perspective must be considered” [Herndon Rebuttal at 13].
- a. Please explain Mr. Herndon’s understanding of the purpose of the Participant Cost Test (“PCT”).
  - b. Regarding Mr. Herndon’s statement that “while the UCT sensitivity resulted in higher economic potential...it is not directly transferable to achievable potential,” Does Mr. Herndon assert that the higher economic potential under the UCT could not lead to an increase in achievable potential? Please explain.

**Response:**

- a. As described in the California Standard Practice Manual, the Participants Test is the measure of the quantifiable benefits and costs incurred by the the customer due specifically to participation in a program.
- b. No. The UCT economic potential is a function of each measure’s costs and benefits from the utility perspective rather than what could realistically be achieved in the market. Economic potential under a UCT screening criterion is therefore not directly transferrable to achievable potential as achievable potential is also influenced by customers’ interest in or demand for energy efficiency as provided by a particular measure.